

**FIGURE 1: ISS-pST gene construct**

1 **GCTAGCATGG CCCTGTGGAT GCGCCTCCTG CCCCTGCTGG CGCTGCTGGC**  
5 51 **CCTCTGGGA CCTGACCCAG CGCGAGCCCT CGAGATGTTT CCAGCTATGC**  
101 CACTTCTTC TCTGTTCGCT AACGCTGTT TTCGGGCCA GCACCTGCAC  
151 CAACTGGCTG CCGACACCTA CAAGGAGTTT GAGCGCGCCT ACATCCCGGA  
201 GGGACAGAGG TACTCCATCC AGAACGCCA GGCTGCCCTC TGCTTCTCGG  
251 AGACCATCCC GGCCCCCACG GGCAAGGACG AGGCCAGCA GAGATCGGAC  
301 GTGGAGCTGC TGCCTTCTC GCTGCTGTC ATCCAGTCGT GGCTCGGGCC  
351 CGTCAGTTTC CTCAGCAGGG TCTTCACCAA CAGCCTGGTG TTTGGCACCT  
401 CAGACCAGCGT CTACGAAGAAG CTGAAGGACC TGGAGGGAGGG CATCCAGGCC  
451 CTGATGCGGG AGCTGGAGGA TGGCAGCCCC CGGGCAGGAC AGATCCTCAA  
501 GCAAACCTAC GACAAATTG ACACAAACTT GCGCAGTGAT GACGCGCTGC  
551 TTAAGAACTA CGGGCTGTC TCCTGCTTCA AGAAGGACCT GCACAAGGCT  
601 GAGACATACC TGCAGGTCA GAAAGTGTGCG CGCTTCGTGG AGAGCAGCTG  
651 TGCCTTCTAG **TCTAGA (SEQ ID NO: 4)**

20 **ATG...GCC-** insulin secretory signal.

GCTAGC- *Nhe* I restriction site incorporated into construct in order to ligate into plasmid.

CTCGAG- *Xho* I restriction site incorporated into construct in order to ligate secretory signal and pST.

25 TCTAGA- *Xba* I restriction site incorporated into construct in order to ligate into plasmid.

2/13

**FIGURE 2: ISS-pST peptide sequence.**

1    MALWMRLPL LALLALWGPD PAAALEMFPA MPLSSILFANA VLRAQQLHQL  
5       AADTYKEFER AYIPEGQRYS IQNAQAAFCF SETIPAPTGK DEAQQRSRSDVE  
101    LLRFSLLLIQ SWLGPVQFLS RVFTNSLVFG TSDRVYEKLK DLEEGIQALM  
151    RELEDGSPRA GQILKQTYDK FDTNLRSDDA LLKNYGLLSC FKKDLHKAET  
201    YLRVMKCRRF VESSCAF    (SEQ ID NO: 3)

10

MAL....AAA- insulin secretory signal, cleaved upon secretion of pST.  
LE- function of XhoI cleavage site; result in no predicted secondary structural changes to pST.

P00000000000000000000

09/807519

WO 00/23601

PCT/AU99/00896

3/13

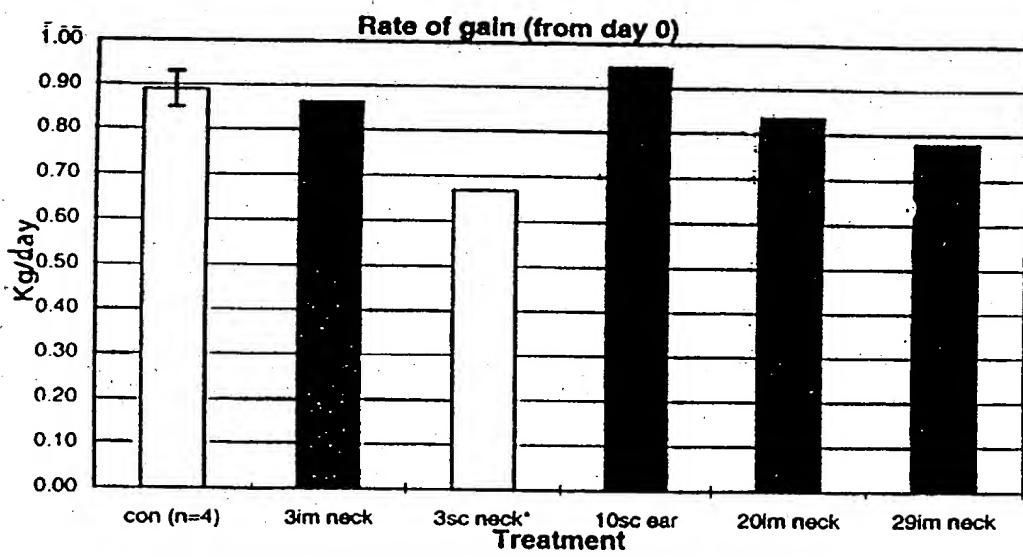


Figure 3

09/807519

WO 00/23601

PCT/AU99/00896

4/13

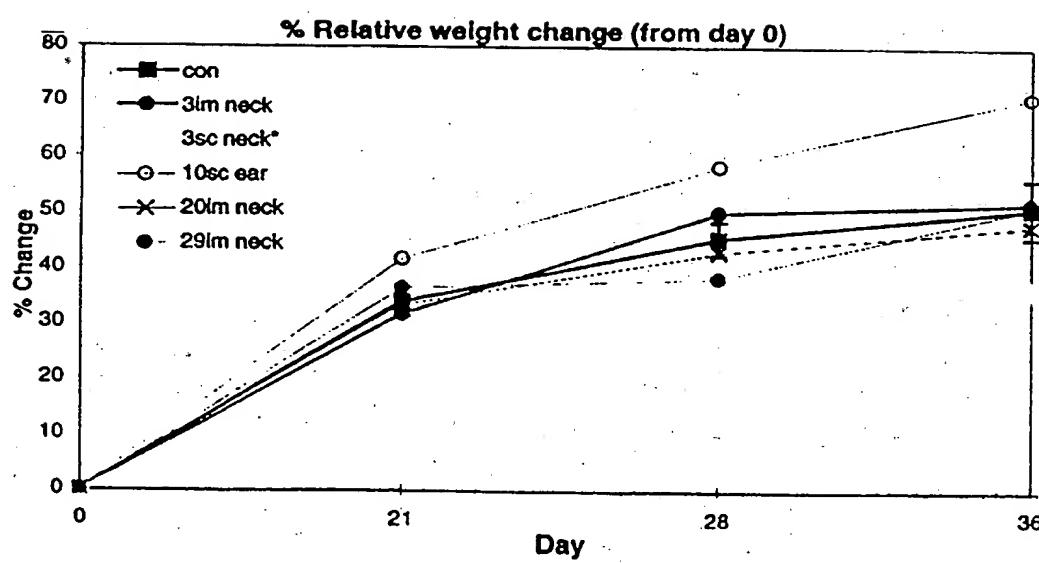


Figure 4

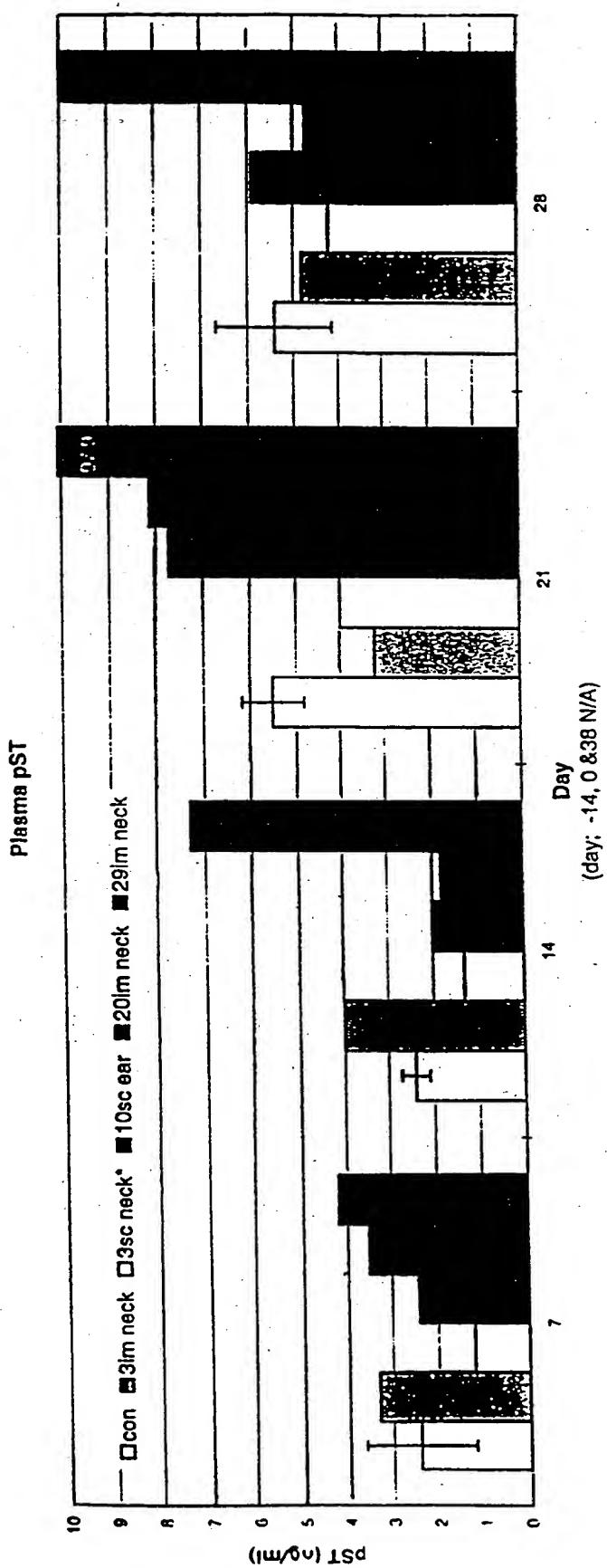
09/807519

WO 00/23601

PCT/AU99/00896

5/13

Figure 5



09/807519

WO 00/23601

PCT/AU99/00896

6/13

Plate 1

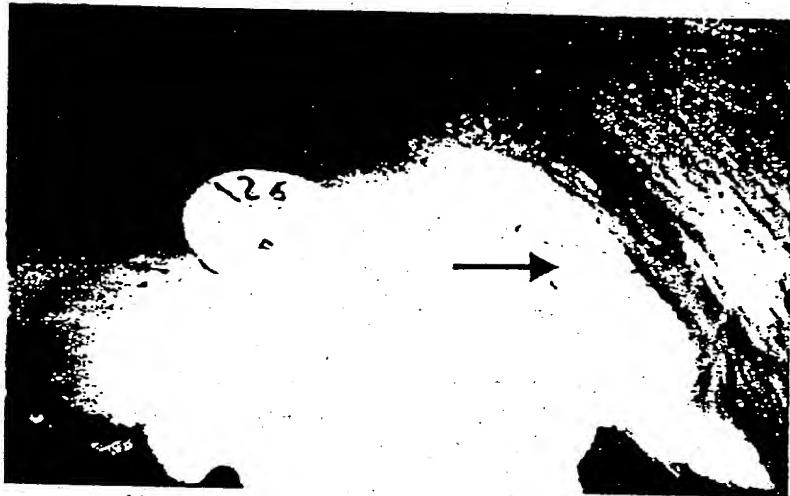


Plate 2



Figure 6

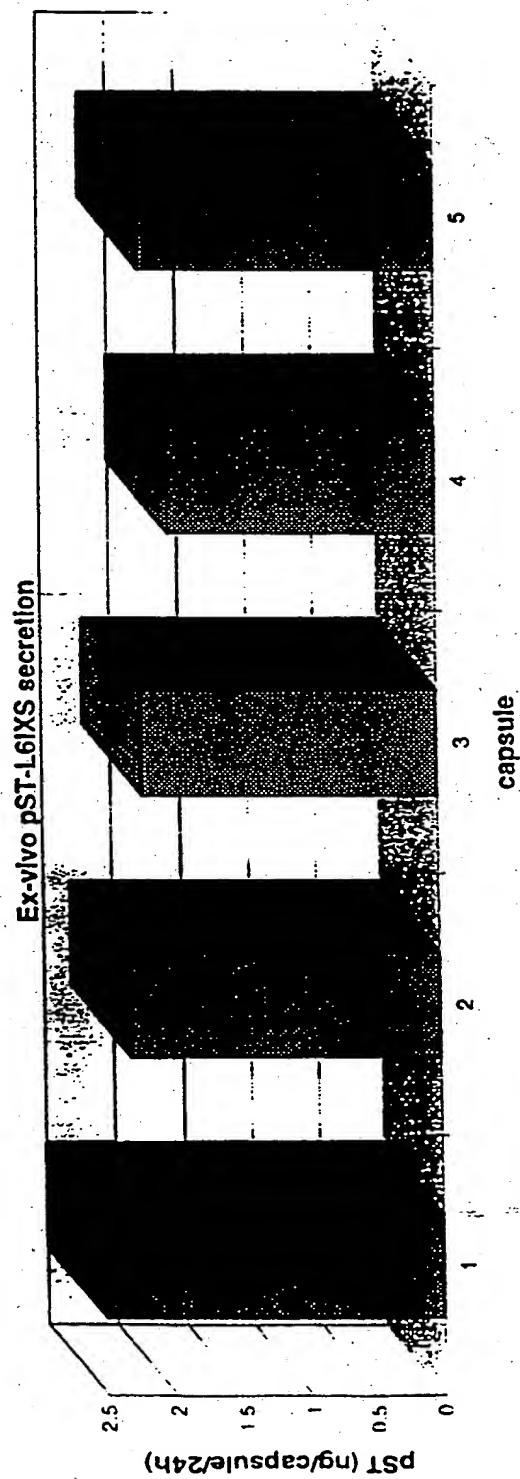
09/807519

WO 00/23601

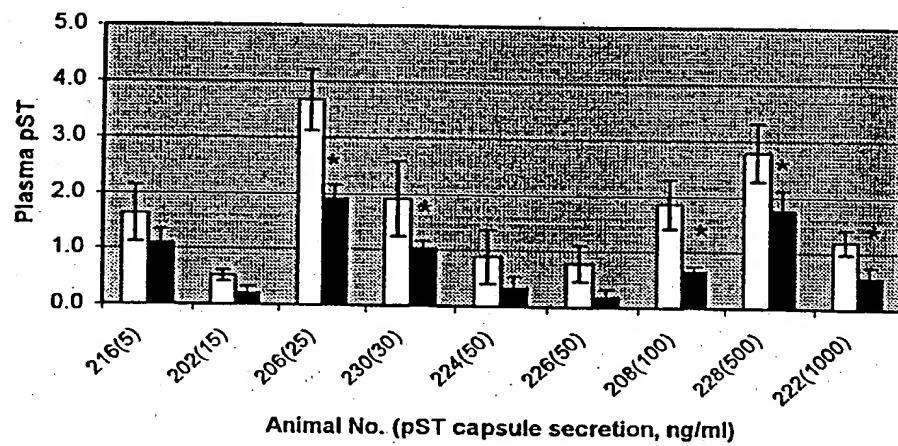
PCT/AU99/00896

7/13

Figure 7



**Figure 8. Mean plasma pST (over 3 hours @ 30min intervals) before (white bars) and 1-week post pST capsule administration (black bars)(\* significant).**



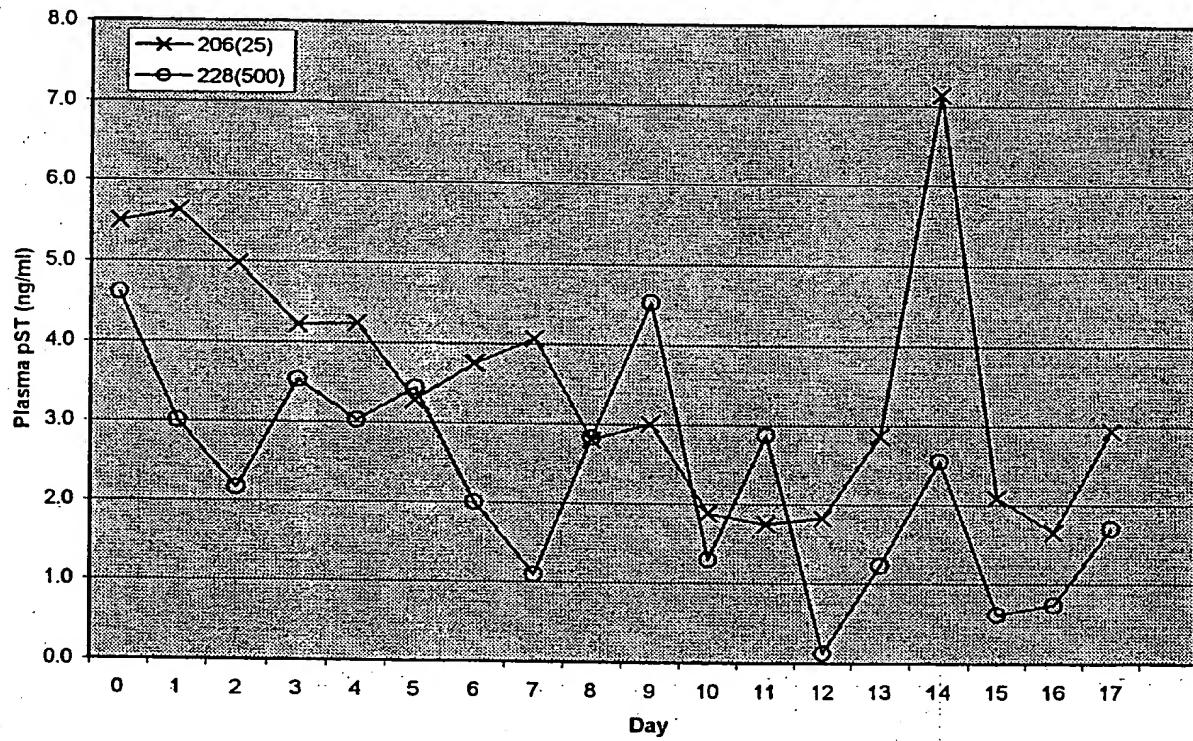
09/807519

WO 00/23601

PCT/AU99/00896

9/13

## Figure 9. Daily pST concentrations



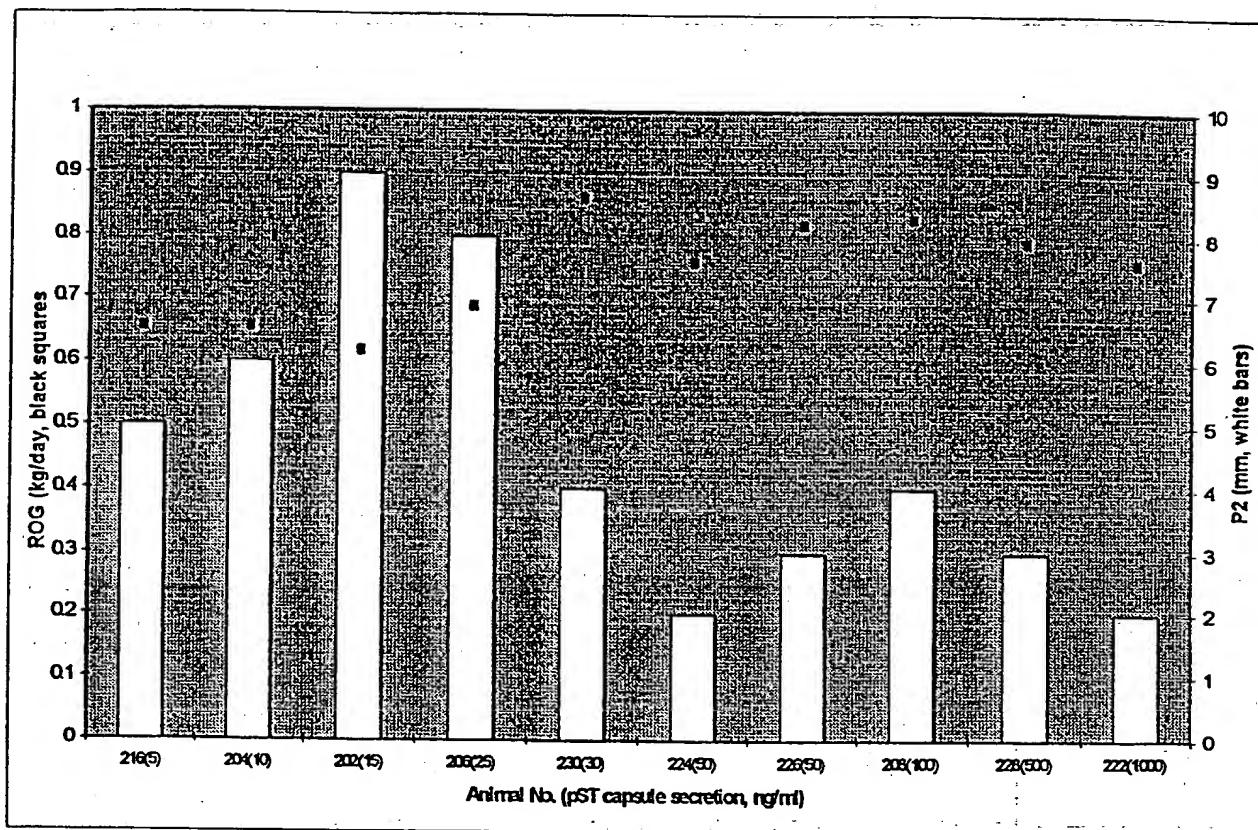
09/807519

WO 00/23601

PCT/AU99/00896

10/13

FIGURE 10



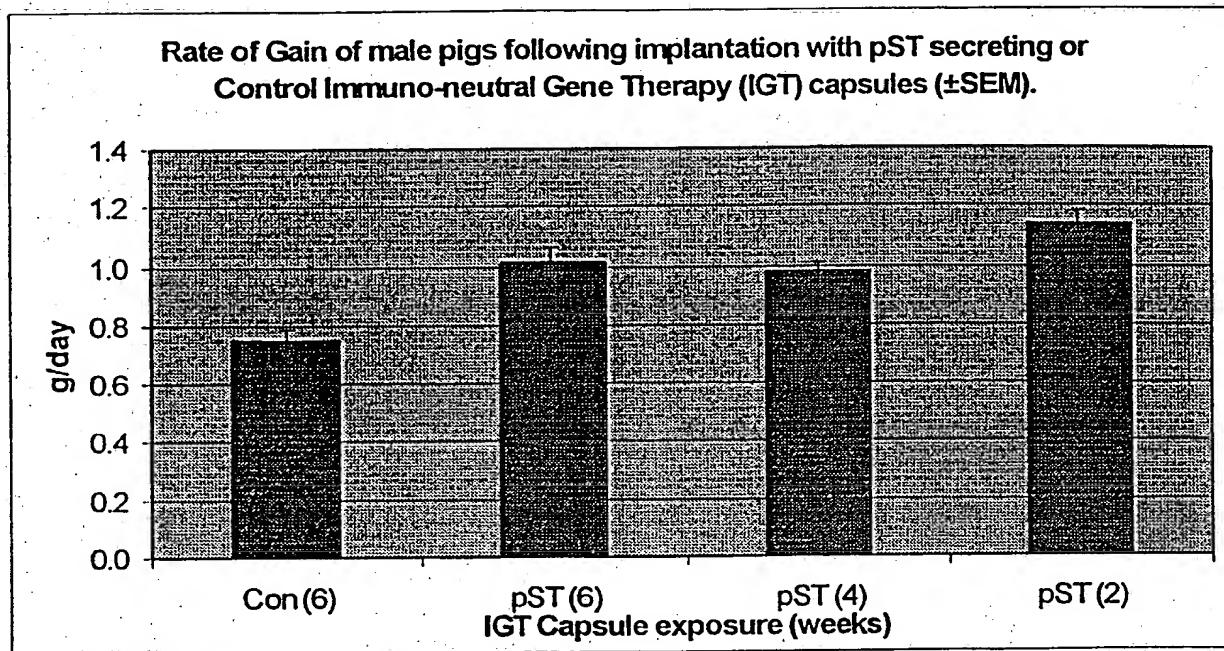
09/807519

WO 00/23601

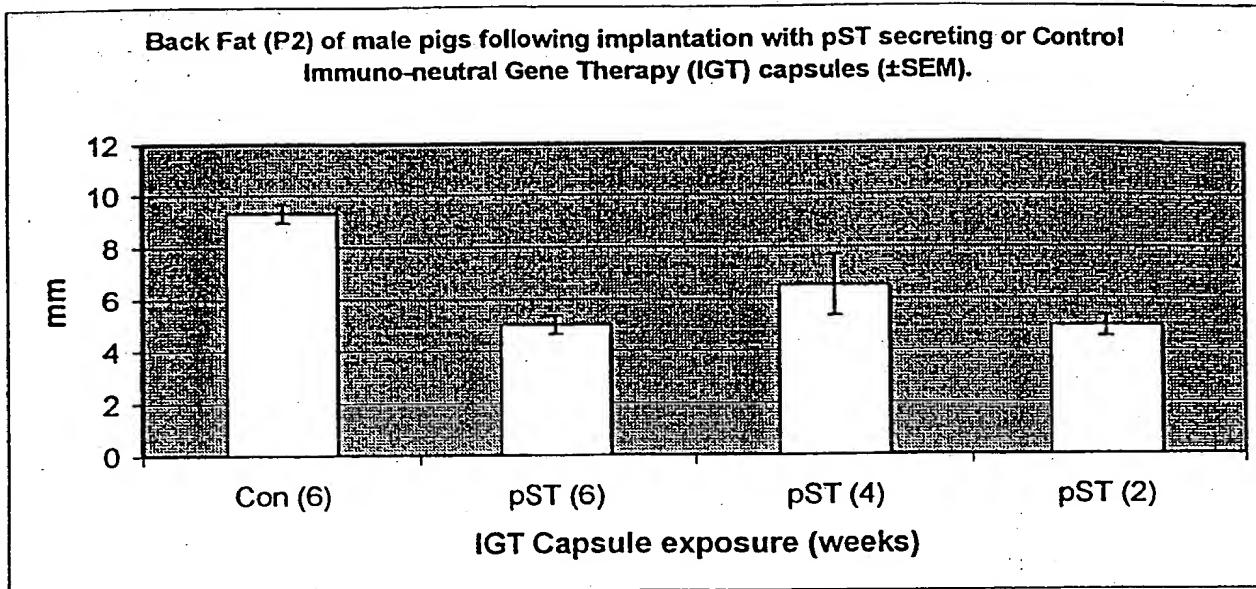
PCT/AU99/00896

11/13

**FIGURE 11**



12/13

**FIGURE 12**

09/807519

WO 00/23601

PCT/AU99/00896

13/13

**FIGURE 13**

